

Amendments to the claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. ***(Currently Amended)*** An isolated polypeptide selected from the group consisting of:
(1) an A isolated polypeptide comprising an amino acid sequence consisting of amino acids 129 to 3657 of the amino acid sequence of SEQ ID NO: 2, and or
(2) an a isolated polypeptide exhibiting SMG-1 (Suppressor of Morphogenetic Effect on Genitalia-1) activity and comprising an amino acid sequence in which 1 to 5 one or more amino acids are deleted, substituted, and/or inserted at one or more positions in an the amino acid sequence consisting of amino acids 129 to 3657 of the amino acid sequence of SEQ ID NO: 2.
2. ***(cancelled)***
3. ***(currently amended)*** An isolated polypeptide consisting of amino acids 1 to 3657 of SEQ ID NO: 2, amino acids 107 to 3657 of SEQ ID NO: 2, or amino acids 129 to 3657 of the amino acid sequence of SEQ ID NO: 2.
4. ***(withdrawn)*** A polynucleotide encoding the polypeptide according to claim 1.
5. ***(withdrawn)*** An expression vector comprising the polynucleotide according to claim 4.
6. ***(withdrawn)*** A cell transfected with the expression vector according to claim 5.
7. ***(withdrawn)*** An antibody or a fragment thereof, which binds to the polypeptide

according to claim 1.

8. *(withdrawn)* A knock-out non-human animal wherein an expression of a gene encoding the polypeptide according to claim 1 is partially or completely suppressed.

9. *(withdrawn)* A method for screening a substance which modifies an SMG-1 activity of the polypeptide according to claim 1, comprising the steps of:
bringing into contact (1) the polypeptide, (2) Upf1/SMG-2, a fragment thereof capable of being phosphorylated, or a fusion polypeptide comprising Upf1/SMG-2 or the fragment thereof, and (3) a substance to be tested; and
carrying out phosphorylation under the conditions that the polypeptide is brought into contact with Upf1/SMG-2, the fragment thereof, or the fusion polypeptide, and analyzing whether or not Upf1/SMG-2, the fragment thereof, or the fusion polypeptide is phosphorylated.

10. *(withdrawn)* A method for screening a substance which modifies an SMG-1 activity of the polypeptide according to claim 1, comprising the steps of:
bringing (1) the polypeptide into contact with (2) a substance to be tested; and
carrying out phosphorylation under the conditions that the polypeptide is brought into contact with the substance to be tested, and analyzing whether or not the polypeptide is autophosphorylated.

11. *(withdrawn)* An agent for suppressing nonsense-mediated mRNA decay, comprising, as an active ingredient, a substance which is obtained by the screening method according to claim 9 and modifies an SMG-1 activity of the polypeptide according to claim 1.

12. (*withdrawn*) An agent for suppressing nonsense-mediated mRNA decay, comprising as an active ingredient, an inhibitor of a phosphatidyl inositol kinase related kinase.

13. (*withdrawn*) An agent for treating and/or preventing a disease caused by a premature translation termination codon generated by a nonsense mutation, comprising, as an active ingredient, a substance which is obtained by the screening method according to claim 9 and modifies an SMG-1 activity of the polypeptide according to claim 1.

14. (*withdrawn*) An agent for treating and/or preventing a disease caused by a premature translation termination codon generated by a nonsense mutation, comprising as an active ingredient, an inhibitor of a phosphatidyl inositol kinase related kinase.

15. (*cancelled*)

16. (*currently amended*) An agent for suppressing nonsense-mediated mRNA decay, comprising ~~an mutant SMG-1 mutant polypeptide that lacks SMG-1 activity~~, or an inhibitor of a phosphatidyl inositol kinase related kinase.

17. (*currently amended*) An agent for promoting nonsense-mediated mRNA decay, comprising ~~as an active ingredient, (1) the isolated SMG-1 polypeptide according to~~ claim 1; ~~(2) a substance which promotes an SMG-1 activity of the polypeptide, or (3) the polynucleotide according to claim 4.~~

18. (*withdrawn*) A method for identifying a nonsense mutation point in a gene, comprising the steps of:
culturing a cell to be tested which is obtained from a subject to be tested and may contain a gene having a nonsense mutation by a premature translation termination codon, in the presence of an inhibitor of an SMG-1 activity; and
analyzing molecular weight of a polypeptide derived from the gene in the cultured cell.
19. (*withdrawn*) A method for detecting a gene having a nonsense mutation, comprising the steps of:
culturing at least two groups of cells to be tested which are obtained from a subject to be tested and may contain a gene having a nonsense mutation by a premature translation termination codon, in the presence of an inhibitor of an SMG-1 activity and in the absence thereof, respectively; and detecting a presence or absence of the difference of an amount of mRNA derived from the gene in the cultured cells.
20. (*previously presented*) The agent of claim 16, further comprising an aminoglycoside antibiotic.